

REMARKS

Reconsideration of the subject application in view of the present amendment is respectfully requested.

By the present amendment, claim 8 has been amended to yet more clearly define the present invention. Claims 8 and 10 have also been amended to correct formal errors therein.

Based on the foregoing amendments and the following remarks, the application is deemed to be in condition for allowance, and Action to that end is respectfully requested.

The Examiner rejected Claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Collins, U.S. Patent No. 2,246,932 (Collins) in view of Braun, U.S. Patent No. 4,111,609 (Braun) and further in view of Zimmern, U.S. Patent No. 4,043,704 (Zimmern).

It is respectfully submitted that claims 8-10 are patentable over the cited references. Specifically, claim 8 recites:

- (i) at least one first pump chamber and at least one second pump chamber and a first piston reciprocating in the at least

one first pump chamber and a second piston reciprocating in the at least one second chamber; and

- (ii) a three-way cock provided at an intersection of the first and second conduits and having a first position in which gas entering through the suction side of the at least one first pump chamber (2) is pumped, in parallel, in the at least one first pump chamber and the at least one second pump chambers and is expelled through the respective outlet valves provided at the outlet sides of the at least one first pump chamber and the at least one second pump chamber and a second position in which gas entering through the suction side (16) of the at least one first pump chamber is compressed in the at least one first pump chamber with an entire compressed gas flowing therefrom through the first conduit into the at least one second pump chamber is further compressed therein, and is expelled through the valve provided at the outlet side of the at least one second pump chamber.

The foregoing novel features of the present invention is not disclosed or suggested in the prior art, including all of the prior art of record in this application. Considering the prior art Collins does not disclose two chambers in each of which a separate piston reciprocates and which can operate in parallel when the compressed gas is expelled from both chambers outside of the pump, and in series when the compressed gas is expelled from one chamber into another and only then outside of the pump. Collins in effect discloses a single chamber in which a single piston reciprocates, the piston dividing the chamber in two sub-chambers, which Collins calls chambers. Collins discloses a combined series/parallel operation (double stage operation) and an alternating operation of both sub-chambers (chambers). Modifying Collins in a manner set forth by the present invention would be contrary to the teachings of Collins and contrary to the intended operation of Collins.

The case law holds that if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 221 U.S.P.Q 1125 (Fed. Cir 1984).

Further, in Collins, the first (25) and the second (12) conduits do not intersect each other, rather they extend parallel to each other. Therefore, it

would have been impossible to provide a cock at their intersection (?), as recited in claim 8.

In view of the above, it is respectfully submitted that Collins neither anticipates nor makes obvious the present invention as defined by claim 8, and claim 8 is patentable over Collins.

Braun and Zimmern likewise do not disclose a series/parallel operation of two chambers as recited in claim 8.

Claim 9 depends on claim 8 and is likewise allowable.

Claim 10 relates to a method of operating the pump of claim 8, relies for its patentability on the same inventive features as claim 8, and is allowable for the same reasons claim 8 is allowable.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place the case in condition for final allowance, it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Respectfully submitted,



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